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(71) Applicant (*for all designated States except US*): BIOSEEK, INC. [US/US]; 863-C Mitten Road, Burlingame, CA 94010 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): PLAVEC, Ivan [HR/US]; 1415 Mallard Way, Sunnyvale, CA 94087 (US).  
BERG, Ellen, L. [US/US]; 978 Blair Court, Palo Alto, CA 94303 (US).

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(74) Agent: SHERWOOD, Pamela, J.; Bozicevic, Field & Francis LLP, 1900 University Avenue, Suite 200, East Palo Alto, CA 94303 (US).

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(54) Title: METHODS FOR CHARACTERIZING SIGNALING PATHWAYS AND COMPOUNDS THAT INTERACT THEREWITH

(57) Abstract: The genes in a signaling pathway can be identified by over or under-expressing each member of a set of genes to be grouped in signaling pathways and measuring parameters under stimulatory conditions. Genes in a common signaling pathway give similar parameter profiles under such conditions. Moreover, the interactions between signaling pathways and the genes and gene products that mediate those interactions can be determined by measuring the response of those pathways to stimuli under conditions that reflect a complex cellular environment. The order in which genes and their products transmit signals through signaling pathways can be determined by assaying the effects of activators and inhibitors on those genes and gene products, and the mechanism of action of a compound of interest can be determined by comparing parameter profiles generated by the compound of interest to those generated with compounds of known mechanism of action.

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